This document contains Charting the Course of the Comprehensive Conservation and Management Plan for Tampa Bay: Dredging and Dredged Material Management, Spill Prevention and Response, Public Education and Involvement, Implementing and Financing

The report (tampabay_ccmp_pt6.pdf) can be downloaded from:

http://www.epa.gov/owow/estuaries/ccmp/documents/tampabay.html

File 6 of 7

December 1996

DR

Dredging to create Davis Islands, Tampa (1925).

PHOTO: BURGERT BROTHERS

Dredging & Dredged Material Management

Coordination among local ports and bay interests in long-term planning for dredging and dredged material management is essential to minimize environmental impacts and costs, address disposal needs, and maximize opportunities to use spoil material for beneficial uses such as habitat restoration.

With an average depth of only 12 feet, regular dredging of the bay is necessary to maintain safe passage through shipping channels serving the bay's three major seaports, its shore-based power plants and industries, and recreational boaters. Dredging can benefit the bay by removing contaminated sediments and improving circulation in poorly flushed areas. But it also takes a toll by clouding the water and impacting bottom life in localized areas. Inertial ammonia also may be released to the water column and atmosphere as a result of dredging sediments with high organic content.

Disposal of dredged material presents another important challenge. Deepening of the 40-mile main shipping channel in the 1970s required the removal of up to 100 million cubic yards of sediment. Maintenance dredging to support the bay's three commercial

Develop a Long-Term Dredging and Dredged Material Management Plan for Tampa Bay

DR-1

ACTION:

Develop a long-term management plan that coordinates the individual dredging and dredged material management plans of the bay's three major seaports, as well as utilities and industries and other users that rely on the bay's navigational channels.

BACKGROUND:

Tampa Bay serves three major seaports managed by independent port authorities. Various utilities and industries also share the bay's 40-mile-long deep-water transportation highway. This action calls for the development of a long-range plan to coordinate dredging and dredged material management for Tampa Bay to maximize shared disposal and beneficial use opportunities while minimizing the environmental impacts and costs associated with these activities in the future. The U.S. Army Corps of Engineers (USACOE), as the major coordinator and sponsor of dredging projects in the bay, has tentatively agreed to direct this comprehensive planning effort with funding assistance from the NEP.

With an average depth of only 12 feet, regular dredging of ship channels and berths is needed to serve area ports and industries. Ship channels, which are dredged to depths of up to 43 feet, must be cleared periodically to remove silty sediments.

Coordinated planning among ports and area industries will help ensure that the most environmentally sensitive and cost-effective strategies are pursued, especially in regard to long-range dredge material disposal, which has only been partially addressed. It also allows bay managers to explore options for beneficial uses of spoil material, minimize impacts to nesting birds on spoil islands, and promote best available technologies to reduce sediment resuspension during dredging.

In fact, local port authorities already have begun working together to examine mutual concerns and foster cooperation. A study conducted for Tampa Bay's port authorities and the Florida Department of Transportation (FDOT) in 1995 cited the establishment and maintenance of shared dredged material disposal sites as one of 13 recommendations adopted by the participants.

The Tampa Port Authority (TPA) estimates that about 840,000 cubic yards of material will be generated annually to maintain the upper part of the main ship channel, which extends south to the Gadsen Point widener. Long-term disposal needs will exceed the remaining capacity of the Port Authority's two spoil islands in Hillsborough Bay (estimated to be about 6 million cubic yards) in about seven years.

TPA has proposed to meet the shortfall by raising the islands' perimeter dikes from 20-30 feet, a strategy being reviewed by TPA's engineering department, as well as the Florida Department of Environmental Protection (FDEP) and the USACOE, which issues and periodically reassesses the port's maintenance dredging permit.

Maintenance dredging of the main ship channel between Gadsen Point and the mouth of Tampa Bay is expected to generate about another 200,000 cubic yards of material a year. Dredged material from the lower segment of that channel (below Cut B) will be placed at a recently approved ocean disposal site 18 miles from the bay's entrance. There are no long-term plans for disposal of the remainder of the material.

Port Manatee's development blueprint includes plans to enlarge its turning basin and widener, and dredge its harbor channel to maintain a 40-foot mean low water depth. A total of about 1.3 million cubic yards of material will be removed for these projects in order to keep pace with the anticipated shoaling of some 220,000 cubic yards of material each year. The Port Authority will contain all construction and maintenance dredging material at several upland sites on its property. These sites can accommodate material for at least another 25 years.

The Port of St. Petersburg, the smallest of the bay's three major seaports, will rely on the ocean disposal site for its sporadic dredging needs, unless cost-effective beneficial uses are identified for the material.

An unknown factor is how private facilities throughout the bay plan to dispose of their dredged material, an issue which should be addressed in long-term planning scenarios.

A strong emphasis on coordinated planning is reflected in 1996 guidance from the National Dredging Team, a consortium of federal agencies led by the EPA, Corps of Engineers and Department of Transportation. The draft guidance calls for the creation of regional planning committees to aid in the development of dredged material management plans.

STRATEGY:

This strategy calls for the development and implementation of a long-range plan to coordinate dredging and dredged material management for Tampa Bay, and highlights additional planning needs that must be addressed to complete this coordinated strategy.

STEP 1 Establish a Tampa Bay Dredging and Dredged Material Management Committee, directed by the Corps of Engineers and co-chaired by the FDEP, to develop and implement a long-term management plan. The Committee should include the bay's three major seaports, port-related industries and utilities, major commercial/private ports, government agencies, local governments, recreational and environmental interests and a representative of Egmont Key State Park. The Tampa Port Authority's existing Dredge Advisory and Migratory Bird committees, which include many of these same parties, may provide an initial membership base.

The Dredging and Dredged Material Management Plan for Tampa Bay should:

- coordinate existing port and industry plans for dredging and dredged material management; identify capacity short-falls; and develop a long-range strategy that integrates these plans to minimize costs and environmental impacts

- explore long-term options for the disposal of spoil material, including beneficial uses such as habitat restoration
- promote best available technologies to reduce sediment resuspension and nutrient releases during dredging, spoil disposal and containment

Responsible parties: USACOE and FDEP, in cooperation with local port authorities and the Committee

STEP 2 Develop a 25-year plan for the management of maintenance material removed from the southern segment of the main ship channel from the Gadsen Point widener to the point where the main shipping channel enters the bay. The Corps should develop the plan in consultation with the Committee established in step 1. The Plan should be consistent with 1996 draft guidance from the National Dredging Team.

As part of the overall plan:

- Determine status of long-term spoil disposal plans for privately maintained shipping channels in the Bay, particularly channels serving Big Bend and other utilities.

Responsible parties: USACOE, in cooperation with local ports and the Committee

SCHEDULE:

With funding assistance from NEP, the project is expected to get underway in Spring 1997.

COST:

The Tampa Bay NEP has set aside $40,000 to assist the Corps in developing a long-term management plan. The Corps is contributing a minimum of $5,000 in-kind services. In-kind support also is anticipated from the area's three port authorities, the FDOT and other entities serving on the Committee.

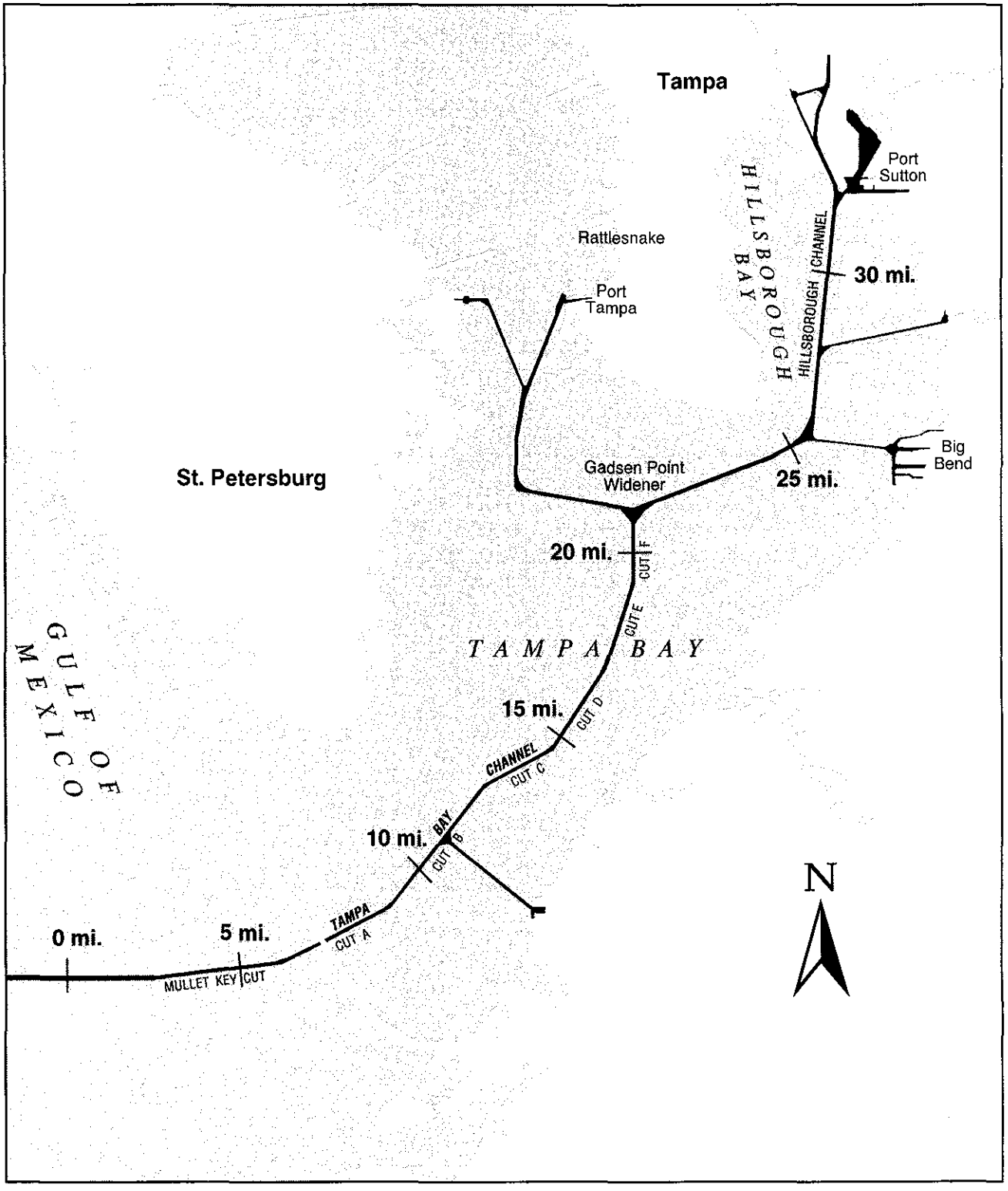
EXPECTED BENEFITS:

Coordinated, long-range planning will help to minimize impacts to bay habitats and water quality from dredging and dredged material disposal and maximize beneficial uses of spoil material, while fostering cooperation that is likely to yield cost-savings for community-supported port authorities. Removal of muck from channels also can help to improve water quality in localized areas.

MONITORING ENVIRONMENTAL RESPONSE:

The USACOE will be responsible for monitoring progress on long-range planning and implementation.

Tampa Bay Shipping Channels

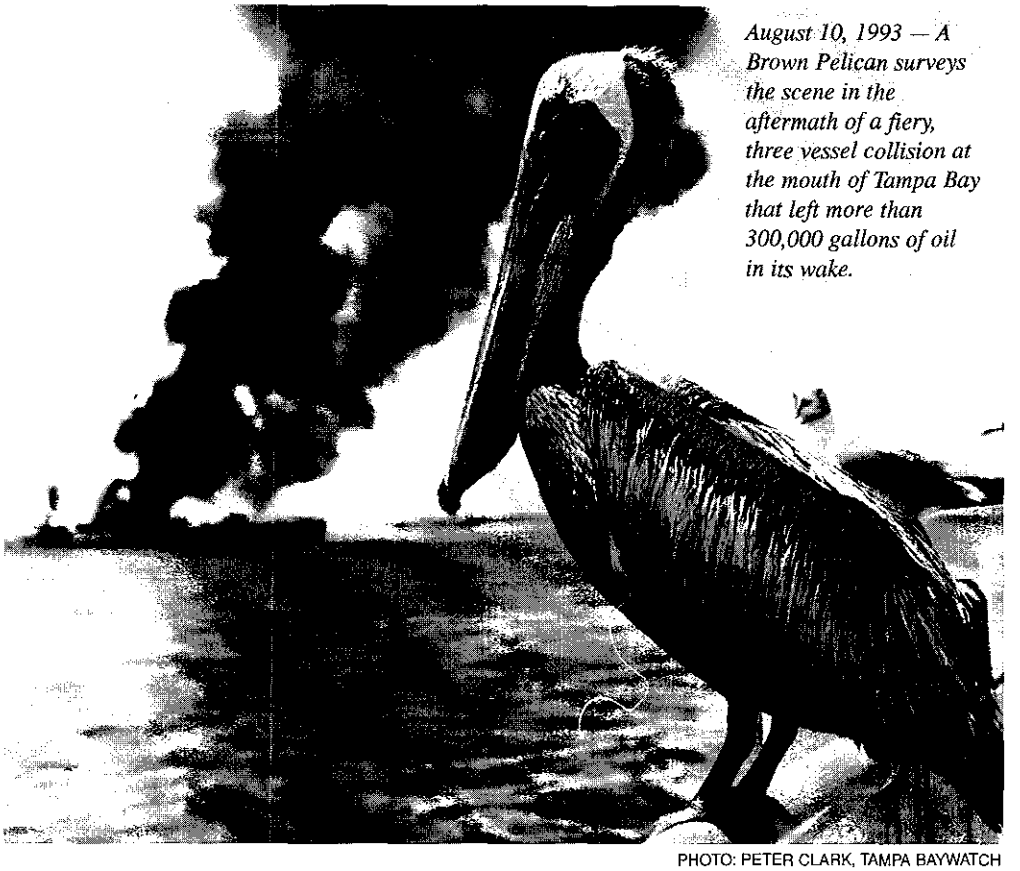


SOURCE: TAMPA PORT AUTHORITY

DR-1

REGULATORY NEEDS:
None anticipated.

RELATED ACTIONS:
BH-1



August 10, 1993 — A Brown Pelican surveys the scene in the aftermath of a fiery, three vessel collision at the mouth of Tampa Bay that left more than 300,000 gallons of oil in its wake.

PHOTO: PETER CLARK, TAMPA BAYWATCH

Spill Prevention & Response

Installation of an integrated vessel tracking system to guide large ships through Tampa Bay ranks as one of the highest priorities in the prevention of oil and hazardous materials spills. Securing a permanent source of funding for the maintenance of the bay's Physical Oceanographic Real-Time Systems (PORTS), which provides valuable tide and current data to commercial and recreational boaters, also is a priority.

On average, about 4 billion gallons of oil and other hazardous materials pass through Tampa Bay each year on huge ships the size of modern skyscrapers. These ships traverse a long, relatively narrow shipping channel that leaves little room for navigational errors.

In addition, billions of gallons of hazardous materials and chemicals — including petroleum products, phosphoric and sulfuric acid and anhydrous ammonia — are

stored in tanks at various ports and industrial facilities along the bay. While spill prevention efforts are essential for all hazardous materials, they are particularly significant in dealing with highly toxic, water-soluble compounds such as anhydrous ammonia or sulfuric acid. A spill of these materials could have a severe, although relatively short-term, impact on the bay's fish and wildlife and threaten public safety.

A three-vessel collision at the entrance to Tampa Bay in August 1993 was a vivid reminder of the bay's vulnerability. More than 330,000 gallons of oil escaped, fouling area beaches and mangroves and killing dozens of seabirds. More extensive damage was averted due to favorable tide and weather conditions and quick deployment of response crews.

Federal law requires that commercial shippers and facilities be capable of handling the cleanup of a worst-case scenario oil or fuel spill. However, large spills can require that additional equipment and personnel be brought in from other parts of the state and Gulf region. That makes effective advance planning and coordination essential.

While large spills have been rare in Tampa Bay, the cumulative impact of countless small spills of less than 25 gallons from fuel and bilge pump discharges and unintentional leaks represents a chronic problem.

MANAGEMENT OBJECTIVES

- Prevent catastrophic spills of oil and other hazardous materials.
- Reduce chronic smaller discharges from boats, ships, marinas and other sources.
- Minimize the environmental impact of spills through planning and response.

SUMMARY OF ACTIONS FOR SPILL PREVENTION & RESPONSE

SP-1 Establish an integrated vessel tracking system for Tampa Bay and permanently fund the PORTS system.

SP-2 Evaluate and update spill response plans for priority areas.

SP-3 Improve fueling and bilge-pumping practices among recreational boaters.

ADDITIONALLY...

The Tampa Bay National Estuary Program (NEP) has recommended that the Environmental Protection Agency's (EPA) Emergency Response and Removal Branch sponsor a local workshop to assist operators of oil transport and storage facilities in complying with the mandates imposed by the Oil Pollution Act of 1990. The workshop would help dispel the confusion over the differing requirements of EPA, the Coast Guard and the Florida Department of Environmental Protection. An estimated 471 million gallons of oil are stored in tanks at area ports. EPA is considering the request.

Improving state authority over harbor pilots is another issue that merits further atten-

tion. A journey from the Gulf of Mexico into the Port of Tampa can take three to seven hours, and mariners at the helm of the ships must make split-second decisions. Highly skilled and locally knowledgeable harbor pilots are the first line of defense against accidents. They are especially important given that there presently are no emergency anchorages available for ships to pull into in case of an emergency, and a huge container vessel may require a mile or more to come to a complete halt.

Currently, the bay's harbor pilots undergo a rigorous training, examination and apprenticeship period before being allowed to guide a ship on their own. The piloting system is governed by the state Department of Professional Regulation (DPR) and appointed representatives of the piloting and maritime industries, who serve on the state Board of Pilot Commissioners.

The 1993 oil spill served as the catalyst for a re-examination of the current oversight mechanisms. Following the spill, the Legislature passed a bill expanding the grounds for discipline of state pilots to include actions against a driver's license for alcohol- or drug-related reasons, and piloting while in an impaired state. The bill also closed a loophole which had prevented discipline of state pilots whose federal licenses had been placed on probation or who had voluntarily surrendered their federal license in lieu of prosecution.

Despite these improvements, additional changes could further reduce the risk of a spill or collision in the bay. One proposal is for Florida to follow the federal policy of requiring a pilot to prove that he is not negligent if he hits a fixed object. Under federal law, a pilot must show that the ship malfunctioned, someone disobeyed orders or some other factor led to the accident. Another proposal is for voice recorders to be placed on ships to document an accident. These proposals, and steps to ensure adequate continuing education for harbor pilots, deserve careful consideration.

SP-1

Establish an Integrated Vessel Traffic System for Tampa Bay and Permanently Fund the PORTS System

ACTION:

Establish an integrated vessel traffic system for Tampa Bay to reduce the potential for maritime collisions and spills. Additionally, secure a permanent funding source for the bay's Physical Oceanographic Real-Time System (PORTS), which provides real-time tide and current data to commercial and recreational mariners and to the spill response community.

BACKGROUND:

Tampa Bay is home to three major seaports, a growing cruise ship industry, and dozens of power plants and businesses that utilize the bay for transportation. More than 4,000 ships enter Tampa Bay each year, transporting over 4 billion gallons of oil, petroleum products and other hazardous materials.

Guiding large vessels along the bay's 44-mile main ship channel, in fair and foul weather, through shallow depths and amid increasing boating activity challenges even the most experienced mariner. The absence of a coordinated vessel tracking system for the bay increases this pressure, as well as the potential for spills resulting from accidents.

Currently, pilots and ship captains on Tampa Bay rely on a radio broadcast network to exchange vessel information when entering or departing port. Large vessels are equipped with ship-board radar, but the quality and range of these systems vary. In fact, limited navigational systems on some vessels force pilots to rely heavily on personal knowledge and skills to safely complete each transit.

Tampa Bay was one of several ports scheduled to receive a U.S. Coast Guard Vessel Traffic System (VTS) in 2002, although federal funds have not been appropriated and the acquisition appears unlikely. The proposed system's exclusive reliance on radar is another important limitation. While radar can pierce fog and darkness, its accuracy and range is limited in heavy rain. Severe and sudden thunderstorms — a summer signature in Tampa Bay — can reduce visibility and radar capabilities to zero, increasing the potential for groundings and accidents.

Differential global positioning systems (DPGS) can reduce or eliminate these risks. DPGS transmits high-precision data on vessel movements in all weather conditions, using a lap-top computer that can be carried aboard or installed on ships. The device enables pilots to view the position and movement of vessels in real time. Collision-avoidance data and weather information also are provided, and the system can be fully integrated with radar surveillance to provide 100 percent coverage of vessel traffic on Tampa Bay. When combined with shore-based radar, DGPS provides the safest available means for navigation. This added protection is particularly vital in Tampa Bay,

which has the longest transit of any port in Florida and no intermediate deep-draft anchorages.

The Tampa Bay NEP supports implementation of the best available DPGS technology as soon as possible. A 1995 state legislative report confirmed the need for a more sophisticated system and led to the formation of a Tampa Bay Area Vessel Traffic and Information Service (VTIS) Consortium to investigate options and develop an implementation plan. The group includes the area's three port authorities, the Coast Guard and representatives of local shipping and piloting interests.

A preliminary report released by the Consortium in March 1996 suggests a phased implementation, beginning with upgrades to the existing system. A $40,000 grant from the NEP will be used to purchase a closed-circuit television for surveillance at Pendola Point near the Port of Tampa to augment a system proposed for installation at the Skyway Bridge. NEP funds also will provide a multi-channel transceiver to back up existing communications and recording equipment in the event of an equipment or power failure. These components are part of an overall plan for a formal Vessel Traffic Information Service (VTIS) jointly operated by the Coast Guard and the Tampa Bay maritime community.

The Tampa Bay NEP also supports permanent funding for the ongoing management of Tampa Bay's PORTS system, which provides vital tide and current data to navigators. The system's "real-time" measurements are most critical to pilots of large commercial vessels and to spill response crews who must quickly and carefully execute containment and cleanup plans. In the 1995 spill, PORTS was instrumental in tracking and predicting the movement of the oil slick.

In recent years, the PORTS system has received funding from maritime industries, the Hillsborough County phosphate severance tax, the Coastal Protection Trust Fund and the Florida Department of Transportation for maintenance of the system. However, no permanent funding has been secured.

STRATEGY:

STEP 1 Support efforts to implement a VTIS utilizing the best available technology as soon as possible.
Responsible parties: Tampa Bay NEP, in cooperation with local governments and the Tampa Bay VTIS Consortium

STEP 2 Secure a permanent source of funding for PORTS.
Responsible parties: local governments and Florida Legislature

SCHEDULE:

The final VTIS implementation plan was submitted to the Florida Legislature in November 1996. The NEP already has committed $40,000 for upgrades to the existing navigational monitoring system. Step 2 is ongoing.

SP-1

COST:

Sources estimate that a combined DGPS-radar system will cost $2 million, including installation and training, and another $450,000 annually to maintain the system. Funding options for installation and maintenance include: user fees (all vessels entering port), Florida Seaport Transportation and Economic Development Trust Fund, State Transportation Trust Fund, General Revenue and the Florida Coastal Protection Trust Fund (FCPTF).

Ongoing maintenance funding for the $1.2-million federally financed PORTS system, which was installed in 1991, is estimated at $220,000. Funding options include: county boater registration fees, navigation districts, port user fees, FCPTF, Hillsborough County phosphate severance tax. The last two sources currently provide maintenance funding, but long-term commitments have not been secured.

EXPECTED BENEFITS:

A combined vessel traffic and information system and real-time weather and current data will ensure the highest level of spill prevention and response for Tampa Bay.

MONITORING ENVIRONMENTAL RESPONSE:

Collision-avoidance data from the new vessel traffic system could be used to measure the success of this technology to aid in spill prevention. The Coast Guard Marine Safety Office tracks all oil and hazardous materials spills.

REGULATORY NEEDS:

None anticipated.

RELATED ACTIONS:

SP-2, SP-3

Evaluate and Update Spill Response Plans for Priority Areas in Tampa Bay

SP-2

ACTION:

Develop detailed spill response plans for environmentally sensitive areas of Tampa Bay to enable quick and effective deployment of crews and containment/cleanup equipment in the event of an oil or hazardous materials spill.

BACKGROUND:

A scientific support subcommittee participating in the development of Tampa Bay's Area Contingency Plan (ACP) — the U.S. Coast Guard's strategic plan for responding to oil spills in Southwest Florida — met several years ago to prioritize areas of the bay most vulnerable to spills and develop site-specific response strategies. The seven priority areas, and recommended protection strategies, identified by the group were:

- Terra Ceia Bay - Block off sensitive inner embayments and direct oil east to a causeway collection area.
- Bishop Harbor - Protect inner portions of the harbor and direct material south to causeway collection area.
- Cockroach Bay/Little Manatee River - Protect inner areas portions of Cockroach Bay and Piney Point and direct material south to Port Manatee or north to Bahia Beach or Apollo Beach.
- Bullfrog Creek - Protect the creek and direct material to Cargill along the north side of the Alafia River for collection, or south to TECO property.
- Bower Tract - Block entrances to creek and direct material to Courtney Campbell Causeway for collection.
- Weedon Island - Implement the island's own spill response plan and direct material to nearby causeway for collection.
- Ft. DeSoto - Protect inside "arrow" of Ft. DeSoto Park, directing material to Ft. DeSoto Beach for collection.

For each area, the group recommended the development of more detailed response plans, including maps identifying response staging, equipment storage and materials collection areas; access points; boat ramps and channel markers; and water depths. The group also urged the installation of permanent boom anchors, where appropriate and technically feasible, to improve spill response and reduce boom deployment time. Overall response planning has been aided by a computerized forecasting and analysis program developed by the Florida Marine Research Institute (FMRI). That analysis program was tailored for use in Tampa Bay in 1996 with NEP funding. The Marine Spill Analysis System includes a series of data layers depicting existing conditions in the bay, sensitive resources and physical landmarks such as roads and boat ramps. The system can be used to create maps that show the extent of a spill and project its course.

SP-2

STRATEGY:

STEP 1 Reconvene the ACP's scientific support subcommittee to evaluate and update response plans for each of the seven priority sites identified. Ensure that these plans are consistent with the methodology employed in the development of the Tidal Inlet Protection Strategies for Oil Spill Response for the Southwest Coast of Florida, a 1995 report based on research by the Marine Spill Response Corporation and the Florida Department of Environmental Protection (FDEP).
Responsible parties: U.S. Coast Guard Marine Safety Office, in cooperation with FMRI, FDEP and NEP

STEP 2 Continue to work with the FDEP, Coast Guard and local emergency response groups to ensure consistency in planning and response strategies.
Responsible parties: NEP

SCHEDULE:

All steps will be initiated in 1997.

COST:

To be determined, based on recommendations of the subcommittee and the scope of planning.

EXPECTED BENEFITS:

Detailed response plans for these priority areas will help protect the bay's most environmentally sensitive resources and enable quick and effective deployment of response crews and equipment.

MONITORING ENVIRONMENTAL RESPONSE:

The FDEP's Bureau of Emergency Response monitors the environmental impacts from and response to oil spills.

REGULATORY NEEDS:

None anticipated

RELATED ACTIONS:

SP-1

Improve Fueling and Bilge-Pumping Practices Among Recreational Boaters

SP-3

ACTION:

Improve fueling and bilge pumping practices among recreational boaters.

BACKGROUND:

As the number of recreational boaters utilizing Tampa Bay increases, small fuel spills and releases of oily bilge water also are expected to escalate. Small, but chronic, spills occur routinely through careless fueling habitats, operation of outboard motors, discharges of oily bilge water and improper disposal of used oil products. According to the National Research Council, these small spills account for 90 percent of the oil that ends up in the nation's waterways.

Although many boaters store their boats on land, thousands of vessels remain in the bay at marinas, yacht clubs and countless docks. Some boat insurance policies require automatic bilge pumps, but boat owners also pump their bilges manually. The cumulative amount of oil entering the bay as a result of recreational vessel bilge-pumping can be substantial.

Typically, recreational vessels stored dockside use automatic bilge pumps to prevent accidental sinkings from equipment failures or storms. These pumps are activated when the interior volume of water reaches a certain level. The bilge water that is automatically pumped from vessels with internal engines may contain small amounts of fuel, cleaning solutions and other chemicals that pollute the bay.

In addition, fuel spills frequently occur when boat owners fill their tanks. Boat owners often can't tell when the tank is full until the overflow valve discharges diesel or gasoline into the bay.

Federal and state laws prohibit the discharge of any fuel or oil within 12 nautical miles of shore. As little as a single cup of fuel can cause a "fuel sheen," which is a misdemeanor that can result in a warning or fine. To help prevent discharges, very large commercial vessels are required to have oil-water separators. However, these are not required, and are often impractical, for smaller vessels. Additionally, only vessels longer than 26 feet in length are required to have a placard reminding the operator that oil discharges are prohibited.

Though enforcement of these regulations is difficult because of the number of boaters and marinas on the bay, current U.S. Coast Guard procedures since April 1995 allow enforcement officers to cite violators. The Tampa Marine Safety Office conducts daily patrols and has written 33 tickets to recreational boaters (and 22 to commercial boaters). Fines range from $50 to $1,000 for a first offense, depending on the size of the spill and can escalate up to $25,000 a day for large spills. Boater education remains the most effective long-term strategy for reducing chronic spills of oil, fuel and oily bilge water to the marine environment. According to a 1992 survey by the

Tampa Bay National Estuary Program (NEP), boaters are more concerned than land-bound residents about environmental impacts, so heightened awareness may accelerate responsible actions by this group.

There are no recreational bilge pump-out facilities in Tampa Bay. If a marina has drums set up to receive oily water, boat owners often have to manually pump their bilge water into buckets and transfer it to a drum — a cumbersome practice that dissuades all but the most environmentally conscientious boaters. Davis Island Yacht Club has established such an operation; boat owners are charged 55 cents per gallon for a pump-out, which pays for the proper disposal of drums.

Use of existing commercial products can assist these efforts. Bilge pillows, diapers and oil-absorbent pads, available at most marine stores, act like magnets in separating oil from bilge water. Boat owners put them in their bilges and dispose of saturated pads, oil-water mixtures and other hazardous boat chemicals in a proper waste container or with a recycler. Various oil-water separators, designed to fit most vessels, also are available for less than $50 for installation in the vent line.

Boater education courses, offered by the Coast Guard Auxiliary now include environmental protection and fueling safety components. Coast Guard Reservists who are SEA PARTNERS present environmental programs and attend boat shows to educate the public and boaters.

This action seeks to reduce small spills by improving education of new boaters and boat owners who store their vessels in the water.

STRATEGY:

The strategy to improve fueling and bilge-pumping practices encourages boat owners with internal engines and fuel tanks to install fuel-overfill protection devices and oil-water separators, where feasible. It also emphasizes boater education and outreach to yacht clubs, sailing organizations, marinas, and "high-dry" facilities where boats are stored.

STEP 1 Encourage registered boat owners to install fuel overfill protection devices and fuel-water and oil-water separators in automatic bilge pumps.
Responsible parties: Florida Department of Environmental Protection (FDEP), U.S. Coast Guard Auxiliary, Marine Manufacturers Association, Florida Sea Grant

STEP 2 Develop educational materials that will stimulate solutions to bilge contamination and fuel handling situations. Ideally, materials will include a free sample "oil- sorb" product that will allow the recreational boater to see, first hand, the practical application of such a product.
Responsible parties: FDEP, U.S. Coast Guard Auxiliary, SEA PARTNERS, Florida Sea Grant

Note: Extensive educational material produced by manufacturers and other boater environmental education programs (Puget Sound Alliance,

Chesapeake Bay Foundations, Center for Marine Conservation [CMC] etc.) already exists and can be tailored for local use.

STEP 3 Distribute materials to yacht clubs, sailing schools, boating organizations, and boat shows around the bay, as well as to all marinas that store boats in the water and in "high and dry" facilities. Form or utilize an existing speakers bureau to address these groups and possibly distribute free oil-sorb samples in partnership with one of the leading manufacturers.
Responsible parties: FDEP, U.S. Coast Guard Auxiliary, SEA PARTNERS, Florida Sea Grant, CMC

SCHEDULE:

The Tampa Bay National Estuary Program will enlist the organizations listed above to evaluate on-going programs and materials, and develop a plan to implement the steps outlined above in 1997.

COST:

Costs to develop and distribute educational materials will be determined based on format selected, but should be accomplished through existing resources or available grants. Manufacturer and boat dealership sponsors should be aggressively pursued.

EXPECTED BENEFITS:

Reduced small spills during fueling and during automatic bilge pumping.

MONITORING ENVIRONMENTAL RESPONSE:

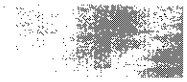
The measure of success for this action will be a reduction in the number of minor spills reported.

REGULATORY NEEDS:

None anticipated.

RELATED ACTIONS:

TX-3, PH-3



EPA Administrator Carol Browner lends a helping hand to Lakewood [illegible] school students [illegible] marsh grass [illegible] restoration [illegible] in Tampa (1994).

PHOTO: TAMPA BAY NATIONAL ESTUARY PROGRAM

Public Education & Involvement

A Community Advisory Committee established in 1991 has assisted the Tampa Bay National Estuary Program in developing outreach strategies and understanding public concerns and perceptions about the bay. Appointed by the NEP's Policy Committee, members include representatives of agriculture, business, education, fishing and the environment, who also share their perspectives as citizen-taxpayers and residents of the communities they represent.

The Committee has played a key role in soliciting public feedback on strategies for bay improvement. In 1995, citizen advisors hosted a series of informal focus groups to discuss the bay's most pressing needs and options for addressing them with neighbors, business associates, maritime and fishing groups, and other community interests. Feedback from these participants identified areas of broad support and issues of potential controversy. A second and highly successful series of focus groups and larger Town Meetings on Tampa Bay were conducted in 1996, following the January 1996 release of the draft Comprehensive Conservation & Management Plan (CCMP).

ACTION PLAN

Public Education & Involvement

This action plan, developed by the Committee, recommends priorities and plans for public education and involvement in the future as the NEP and its community partners begin implementation of the CCMP.

Future community outreach should seek to:

- foster continued community support for bay restoration and CCMP implementation by continuing to educate residents about bay issues, and publicize the bay's progress and needs
- improve public faith in the ability of bay managers and organizations dedicated to its restoration to "work smart" to leverage resources, avoid duplication and focus on priorities
- maximize direct opportunities for public involvement in bay restoration and protection.

A top priority in 1997 will be the development and distribution of a public summary of the final CCMP for residents, legislators and community leaders. This will lay the foundation for a series of annual progress reports to the community documenting progress in the implementation of the bay plan.

Other 1997 initiatives proposed by the Community Advisory Committee include:

- a public opinion poll to identify community concerns and comprehension of bay issues, as well as gauge support for bay restoration initiatives and funding
- a small grants program to support grass-roots bay restoration and improvement projects by community groups and schools, with special outreach to low-income and minority groups
- periodic public forums, sponsored by NEP, on controversial and important bay issues, such as NEP's televised debate on the Ban-The-Nets referendum
- development of a graphic-and-text environmental index on the state of Tampa Bay for periodic publication in local newspapers

The Committee and NEP also will evaluate the need for a companion to the 1996 Teachers Guide to Tampa Bay, a middle-school curriculum kit developed by the NEP and Tampa Tribune for distribution to more than 350 schools. Additionally, the Committee recommends:

- continued distribution of the Boater's Guide to Tampa Bay, a publication of the NEP and Florida Marine Research Institute which already has been distributed to more than 100,000 boaters.
- continuation of the NEP newsletter, *Bay Guardian,* to spotlight the state of the bay and progress in the bay's recovery, and aggressive efforts to publicize bay issues in the media to inform and educate the public;

- continued advocacy of bay restoration and protection efforts in cooperation with other public policy and interest groups, and efforts to educate the public on issues affecting the bay;
- continued support for organizations that enlist and effectively utilize volunteers, such as Tampa BayWatch, The Florida Aquarium and the National Audubon Society.
- periodic "spotlight on solutions" field trips targeting and co-sponsored by various audiences with regulatory and natural resource interests. For example, a field trip hosted by a local alliance of developers might target urban designers and showcase exemplary commercial landscapes that enhance the environment. Public field trips to bay restoration sites and parks also might be offered in cooperation with The Florida Aquarium.

Funding to implement these initiatives will be covered in the NEP's annual workplan or secured through grants and community partnerships.

Implementation & Financing

This chapter describes how the Comprehensive Conservation & Management Plan (CCMP) for Tampa Bay will be implemented by local governments, agencies and other bay stakeholders, and discusses the oversight role of the Tampa Bay National Estuary Program (NEP) in ensuring that the goals of the plan are achieved.

Local government and agency partners in the Tampa Bay NEP anticipate signing an agreement in early 1997 pledging to carry out the recommendations of the final management plan. The agreement will include specific goals for the recovery of natural resources, such as seagrasses and wetlands, as well as water and sediment quality goals, and priorities for spill prevention and response and dredging and dredged material management. It also will spell out each partner's responsibility for meeting those goals, and a timetable for achieving them.

But how those targets are reached will be left up to individual communities, who may select the most suitable options from among a range of alternatives. Many of those options are described in this plan as examples of how a community might comply with its commitment to reduce pollution in the bay. This approach not only emphasizes flexibility, but allows local governments to focus their limited resources in the most cost-effective and environmentally beneficial manner.

Additionally, the implementation strategy outlined in this chapter addresses how these goals and initiatives for Tampa Bay will be integrated into existing management plans and regulatory programs.

Existing bay management expenditures also are presented to provide an understanding of how much money is currently allocated and where it is going. Financing options that follow illustrate possible sources of revenue and approaches to accomplish goals of the plan that might not otherwise be achieved with existing resources. Wherever possible, the Tampa Bay NEP advocates the reallocation or more efficient use of existing revenues to carry out recommended actions.

Implementing the Plan for Tampa Bay

Successful implementation of the CCMP will require firm commitments for action, flexibility for local governments to pursue the most cost-effective strategies to achieve a particular goal, integration of goals and strategies into existing regulatory programs and rules, and effective oversight to ensure that actions are carried out in a timely manner.

Commitments will be secured through an implementing agreement which NEP partners expect to sign in 1997, after the bay management plan has been approved. These partners include Hillsborough, Pinellas and Manatee counties; the cities of Tampa, St. Petersburg and Clearwater; the Southwest Florida Water Management District (SWFWMD); Environmental Protection Commission of Hillsborough County; the Tampa Port Authority; Florida Department of Environmental Protection; U.S. Army Corps of Engineers; U.S. Environmental Protection Agency (EPA). Other agencies, such as the Florida Game & Fresh Water Fish Commission, also will be encouraged to sign the formal agreement.

The goals of the CCMP (Chapter 4 of this document) are the goals of the implementing agreement, which will require agencies and local governments to develop individual action plans detailing projects that will satisfy those goals.

A key objective of the agreement is to achieve nitrogen management goals approved by the Tampa Bay Management Committee in 1996. Local government action plans will address that portion of the nitrogen goal which relates to stormwater runoff and municipal point sources. A Nitrogen Management Consortium of local electric utilities, industries and agricultural interests, as well as local government and regulatory agency representatives, has been established to develop an action plan to address the remainder, which is attributed to atmospheric deposition, industrial and agricultural sources and springs. The consortium, which includes local government and agency representatives, is to deliver its action plan by August 1997.

Action Plans to Achieve Bay Goals

Within 12 months of signing the implementing agreement, each participating local government and agency will submit an action plan to the NEP's Management and Policy committees detailing how it will meet its responsibilities. Communities may employ various strategies to reach their respective goals. Action plans will include descriptions of proposed projects, how that project contributes to achieving goals (quantified, where applicable), with supporting documentation of benefits, an implementation schedule, and a cost and financing plan.

These action plans are particularly important in relation to nitrogen loading goals, because relevant aspects of these plans will be incorporated into regulatory permits. These action plans may be based on ongoing watershed initiatives begun prior to the adoption of the comprehensive plan for Tampa Bay, such as Pinellas County's Allen's Creek watershed initiative, as long as these watershed plans are consistent with the bay plan's objectives. In fact, watershed action plans that address specific basins within the larger bay ecosystem can be an excellent tool for implementing the bay plan.

Integrating the Plan into Existing Environmental Rules & Programs

Once government and agency action plans to achieve bay goals are approved by the Program's Management and Policy committees, these action plans will be incorporated into state and federal water quality permits addressing direct or point discharges and stormwater management. Local governments will amend their comprehensive plans to promote, and assure consistency with, the approved action plans.

The CCMP has been developed in cooperation with the bay area's six largest local governments, broad-based community interests, and environmental agencies at the local, state and federal levels, to reach consensus on bay restoration goals and strategies. The Tampa Bay NEP also has coordinated closely with local environmental alliances devoted to improving and protecting specific regions of the bay, including the Hillsborough River Greenways Task Force and related greenways initiatives and the Cockroach Bay Aquatic Preserve Management Team. Both these public-private alliances of environmental and economic stakeholders are excellent models for community-based planning.

A key partner in the Tampa Bay NEP has been SWFWMD and its Surface Water Improvement and Management (SWIM) Program, which is expected to play an important role in implementing the bay plan. Because of its prominent role, identifying a permanent source of funding for the SWIM program will be crucial to long-term bay restoration efforts.

The Tampa Bay NEP also works closely with the Agency on Bay Management (ABM), which is the natural resources committee of the Tampa Bay Regional Planning Council. ABM is spearheading efforts to investigate and make final recommendations to the NEP for several important actions in the Bay Habitats Action Plan.

Results of a Federal Consistency Review, to evaluate and address any inconsistencies among goals of other government programs and those established for Tampa Bay, are available as an appendix to this document.

Roles of the Tampa Bay NEP in Overseeing Implementation

The success of the Tampa Bay NEP ultimately will be measured in bay improvement achieved through implementation of the CCMP. Consequently, a key ingredient for success is defining who should oversee implementation of the plan and what oversight should entail.

In 1996, the local governments and agencies comprising the Tampa Bay Management Conference elected to continue their participation in the NEP to oversee implementation of the plan. The primary oversight roles of the Tampa Bay NEP will be to monitor progress (in implementation and the bay's recovery), assist implementation, continue public outreach and involvement and improve data management. Specific efforts associated with these functions are outlined below.

One of the strengths of the Tampa Bay NEP is the precedent-setting alliance of local governments and regulatory agencies represented on the NEP's Policy Committee, which sets overall direction and contributes funding for the Program. In fact, local government and agency partners feel that maintaining this decision-making structure — with regulators and regulated interests working together toward common goals and assisted by scientific and community advisors — is critical to assuring implementation of the plan for Tampa Bay. This bottoms-up approach to environmental management gives all partners a voice in the future of Tampa Bay.

The Policy Committee also is evaluating options for expanding Management

Conference membership to broaden representation by smaller local governments and private industry, as well as other agencies that may play an important role in the bay's future.

EPA has set aside $1.2 million, or $300,000 per year over four years beginning in 1997 to assist the Tampa Bay NEP in overseeing implementation of the CCMP. The federal contribution requires a local funding match of 25 percent, to be provided by the NEP's local governments and agency participants.

A comprehensive evaluation of the goals and strategies established through the NEP for Tampa Bay will be conducted five years after the adoption of the plan to ensure that restoration efforts and funding are effectively targeted.

Oversight Roles

Monitor & Report Progress

- Monitor progress in implementing bay action plans and achieving goals for Tampa Bay
- Revise action plans and goals as necessary, based on new findings
- Prepare an annual progress report for the NEP Management and Policy Boards, and the community on progress in charting the course for Tampa Bay
- Produce a biennial bay monitoring report for bay managers

Assist Implementation

- Seek timely implementation of priority actions
- Pursue grants and other funding to support bay restoration
- Direct or coordinate technical investigations and other efforts to assist implementation (especially studies on atmospheric deposition conducted in partnership with EPA)
- Provide staff support for the Management Conference of the Tampa Bay NEP, comprised of participating local governments, agencies, and technical and community interests devoted to bay improvement
- Assist in conflict resolution if mediation is needed

Public Outreach and Involvement

- Continue community outreach and involvement efforts, promoting priority issues, progress in charting the course for bay restoration, and bay stewardship and involvement

Data Management

- Improve public and agency access to bay management data and information, particularly on the Internet

Cost & Financing

Costs associated with individual actions presented in *Charting the Course* are presented in those action summaries. In many cases, these represent the level of effort that an implementing party might anticipate in budgeting these tasks. However, these should not automatically be construed as requirements for new sources of revenues, since some of these initiatives can be accomplished with existing resources or by redirecting current funding allocations to better address the bay's needs.

Additionally, a number of actions seek to improve coordination and planning among local governments and agencies, and may actually result in cost savings for currently funded activities.

In fact, the Tampa Bay NEP strongly advocates the reallocation or more efficient use of existing resources to carry out recommended actions. A study by the NEP indicates that existing bay-related expenditures at the local, state and federal levels exceed $250 million per year (based on FY94-95 budgets). Of that amount, 68 percent, or roughly $170 million, is devoted to wastewater collection, reuse and treatment — activities that either indirectly or directly benefit the bay, even if they aren't performed solely for the bay's benefit. These activities are funded largely through wastewater utility enterprise funds, created by local governments expressly for these purposes.

The next largest allocation of 14 percent, or nearly $35 million, is expended primarily by local governments and the Southwest Florida Water Management District for stormwater management, including handling and treatment. About half of these programs are financed through stormwater utility funds. The remainder comes from ad valorem taxes, energy utility taxes, permit fees and licenses, pollution trust funds and state and federal general revenues.

Budgets for habitat restoration, preservation and management total approximately $7 million or nearly 3 percent, excluding land acquisition (another 4 percent). Regulation and enforcement funding, dredging and dredge material management, environmental monitoring and public education comprise $13.5 million, or 5.4 percent of the expenditures. General revenues, in combination with ad valorem taxes and special fees and licenses, are used to finance these various efforts.

Preliminary analyses indicate that the cost to maintain existing nitrogen loadings to the bay may be relatively minimal over time. Nitrogen loadings to the bay are expected to increase 7 percent by 2010, or about one-half of one percent per year. Annual costs to offset those loads are estimated at approximately $100,000 per ton of nitrogen*, or about $1.7 million per year.

Preliminary costs also have been established for habitat restoration, another focal point of the comprehensive plan for Tampa Bay. Those figures suggest that approximately $350,000 of existing annual expenditures (excluding land purchase costs) would be necessary to restore about 20 acres of low-salinity tidal stream habitat per year.

Although costs for meeting other goals have not been fully determined, recommended actions will focus on cost-effective use of existing resources and a clear return on investment. Any additional funds required to restore Tampa Bay will be documented

CHARTING *the* COURSE
FOR TAMPA BAY